

June 22, 2010

*Binghamton-Johnson City
Joint Sewage Board*

Honorable Kirsten Gillibrand
100 State Street Room 4195
Rochester, New York 14614

*Chemung County Sewer
District*

Honorable Charles Schumer
15 Henry Street M-103
Binghamton, New York 13901

City of Corning

**Re: Pending Total Maximum Daily Load (TMDL) Allocation for New York State
& Associated Upgrading of Wastewater Treatment Plants
Chesapeake Bay Restoration Initiative**

City of Hornell

Dear Senator Gillibrand and Senator Schumer:

Town of Erwin

In our capacity as owners and managers of wastewater treatment plants (WWTPs) within the New York State portion of the Chesapeake Bay watershed, we are writing to you to express concerns and considerations regarding the pending TMDL allocation to New York State that will be dictated soon by the U.S. Environmental Protection Agency (USEPA).

Village of Addison

Utilizing a complex computer model, the Chesapeake Bay Program (CBP) has reportedly developed an estimate of the total annual loading for nitrogen, phosphorus, and sediment that it considers to be the maximum quantities that the Bay can receive and meet water quality standards. It is our understanding that the USEPA is preparing to allocate these respective total annual loadings as TMDLs to each of the states within the Chesapeake Bay watershed on July 1, 2010.

Village of Bath

Village of Canisteo

The fair and equitable allocation of these total annual loadings, for the establishment of TMDLs, is of utmost importance to New York State. The pending TMDLs will dictate the degree of nutrient and sediment reduction required of New York State, as well as the magnitude of associated improvements and programs to obtain these reductions. Although the TMDLs could impact each of the general nutrient source categories (agriculture, forest/open space, urban stormwater runoff, septic systems, and wastewater), we are focusing upon WWTPs in this letter.

Village of Endicott

I. BACKGROUND

Village of Owego

The water quality of the Chesapeake Bay is being negatively impacted from excess nutrients (nitrogen and phosphorus) and sediment that are conveyed to the Bay largely by rivers and streams that flow into it. Approximately 90 percent of the Bay tidal waters are listed as "impaired" under the Federal Clean Water Act, due to low dissolved oxygen levels and other problems associated with excess nutrients and sediment. The Chesapeake Bay watershed spans portions of six states (Delaware, Maryland, Pennsylvania, Virginia, West Virginia, and New York) and the District of Columbia.

Village of Painted Post

Village of Waverly

The New York State portion of the Chesapeake Bay watershed consists of the Chemung and Susquehanna River basins and includes approximately 6250 square miles in 19 counties with a population of 650,000 people. Compared to the entire Chesapeake Bay watershed, the New York State portion of the watershed has roughly 4 percent of the overall population and 9.7 percent of the overall land area. New York State is considered a "headwater" state in that we are remote from the Bay itself.

Our respective WWTPs have been classified by the New York State Department of Environmental Conservation (NYSDEC) as being “significant”, per their 2006 New York State Tributary Strategy for Chesapeake Bay Restoration (Tributary Strategy), in that our permitted hydraulic loading rates equal or exceed 0.4 MGD. As per this Tributary Strategy, 28 “significant” WWTPs have been identified in New York’s portion of the Chesapeake Bay watershed. Of these, 26 are municipal WWTPs and two are private WWTPs, treating dairy wastes. As per the NYSDEC, improvements/upgrades will be required to our WWTPs to reduce nutrients being discharged, as a key component of the Chesapeake Bay Restoration initiative.

II. COST, FINANCIAL, AND COMMUNITY GROWTH IMPACTS

A. Costs

The cost to convert/upgrade each of the significant WWTPs in New York State to nutrient removal capabilities would be substantial. As per the NYSDEC’s Tributary Strategy, an overall project cost of \$200 million was estimated in 2006, to upgrade each of the 28 significant WWTPs within New York State. Assuming a 5.5 percent increase in construction costs per year since 2006, a rough overall project cost (in 2010 dollars) is around \$250 million. Beginning in 2007, the Binghamton-Johnson City Joint Sewage Facility was upgraded for nitrogen removal for a project cost of approximately \$70 million, which equated to roughly \$2300 per equivalent dwelling unit (EDU).

In addition to the project costs, the annual operation and maintenance (O&M) costs would also be expected to increase on the order of 50 to 70 percent for a typical upgraded WWTP, due to increased electric, treatment chemicals, and increased sludge production. For the Binghamton-Johnson City Joint Sewage Facility, annual O&M costs increased by roughly 65 percent since 2006, for nitrogen removal (excluding phosphorus removal). This equates to an ongoing cost to be borne by local rate payers, including senior citizens on fixed incomes, businesses, and industries.

B. General Economic Climate

There has been a general loss of industrial base and population in the New York State portion of the Chesapeake Bay over the last 25 years. Loss of jobs and population is also reflected in the rather high percentage of population falling below the poverty line (about 22 percent). Furthermore, the median age of upstate New Yorkers is 37.5, more than two years older than the nation as a whole. By 2020 the upstate New York population will reach a median age of 40. Presently, one in four of the region’s households contain people aged 65 or older.

C. Financial & Community Growth Impacts

As it now stands, the pending TMDLs will place burdensome, unfunded mandates on the municipalities with a significant WWTP, and may force tax or rate increases to citizens to balance strapped municipal budgets. Many of our citizens are on fixed incomes with little ability to absorb additional expenses.

Furthermore, the cost of these requirements would further add to New York State’s already stifling business environment, increasing the cost of doing business in a State with a high level of taxation. As you are aware, the high level of taxation and ongoing cost of doing business in New York State is evident in the number of companies who have fled to other, more accommodating states, not to mention overseas.

As an example, this could financially impact the treatment plant for Pollio Dairy in Campbell, New York, as well as existing municipal wastewater treatment plants that receive a portion of their waste stream from dairy operations, such as the Village of Waverly and the City of Hornell. Also, the expansion of existing industries and the development of new industries could be thwarted, depending upon the nature of their respective wastewaters.

III. FAIRNESS IN DEVELOPING TMDL ALLOCATIONS

Basic fairness principles should be exercised by the USEPA in their development of TMDL allocations for the states. With fairness and equity in mind, the following points should be considered, when deriving New York's TMDL.

A. New York State's Current Water Quality & Delivered Load Factors

It is commonly understood that if each of the Bay states had New York's current water quality (as measured near the Pennsylvania border near Sayre, Pa), excess nutrient and sediment issues would not exist in the Chesapeake Bay. This concept is reflected in NYSDEC's New York State Tributary Strategy that states *"Monitoring data shows generally good water quality in New York and that nutrient and sediment levels are declining. This is largely due to a strong water stewardship ethic and an increasing amount of forest land cover."*

Furthermore, the percentage of a nutrient quantity discharged to a river that is actually delivered to the Bay decreases with the distance from the Bay itself. The ratio of the "edge of stream" nutrient quantity to the portion reaching the Bay is known as a *delivery factor*. As New York State is located in the headwaters of the Chesapeake Bay watershed at a considerable upstream distance from the Bay, some of the lowest nutrient delivery ratios exist within New York. For example, in regards to Total Phosphorus, the delivery ratios for New York State range from 23 to 47 percent, whereas the portions of Maryland and Virginia near the Bay have a delivery factor of 80 to 100 percent. Also, for example, the Hornell/Canisteo area of New York is located in the upper portion of the watershed and has a delivery factor of Total Nitrogen of less than 20 percent.

These concepts are significant for the following reasons:

1. Given its good water quality and the low nutrient delivery factors, New York State's impact on the Bay's water quality is significantly less than that of other states closer to the Bay.
2. Assuming equivalent upgrade costs, it will cost substantially more for a New York State WWTP to remove a pound of delivered TN or TP from the Bay, than states closer to the Bay.

B. Limited Overall Nutrient Reduction Potential

The amount of nutrients delivered to the Chesapeake Bay from the significant WWTPs in New York State is relatively small in comparison to the current overall nutrient loadings being delivered to the Bay. Consider the following in regards to Total Nitrogen (TN) and Total Phosphorus (TP).

Overall Delivered TN to Bay	= 259 million lbs/year	(from all sources)
Delivered TN from WWTPs in New York	= 1.76 million lbs/year	
% of TN from WWTP in Overall Delivered TN	= $1.76/259 \times 100 = 0.7\%$	
Overall Delivered TP to Bay	= 17,751,000 lbs/year	(from all sources)
Delivered TP from WWTPs in New York	= 197,114 lbs/year	
% of TP from WWTP in Overall Delivered TP	= $197,114/17,751,000 \times 100 = 1.1\%$	

As such, at present, New York State's significant WWTPs contribute only 0.7 percent and 1.1 percent of the TN and TP delivered to the Chesapeake Bay, respectively. Given this small percent contribution, upgrading New York's WWTPs would result in reductions in TN and TP loadings to the Bay of less than 1 percent, respectively. This apparent lack of a sizeable percentage impact may speak to the possible ineffectiveness of a basin-wide WWTP nutrient removal requirement for New York State, and casts doubt if the associated funding would be wisely used.

C. Remoteness from Chesapeake Bay & Associated Benefits

New York State is remote from the Chesapeake Bay and would derive no direct benefit from improvements to its water quality. Those benefits, associated with improved Bay water quality, would be enjoyed by those states immediately adjacent to the Bay. As such, without financial assistance, New York State taxpayers will be paying largely to the benefit of those that live and work around the Chesapeake Bay. What benefit will the affected residents of New York State realize, and has this been documented in any semblance of a socio-economic impact study?

D. Population Growth Distribution within Bay Watershed

It is estimated that the population within the Chesapeake Bay watershed has increased 14.2 million to 17.7 million people from 1990 to 2010, an increase of 3.5 million people over this period. Maryland and Virginia account for most of this population increase, adding 1.3 million and 1.8 million people, respectively. The population within the New York State portion of the Bay watershed stagnated or declined over this same period, with some of the larger municipalities having lost about 20 percent of their population between 1970 and 2000.

E. Credit for Past Nutrient Reductions & Nutrient Increases

In the development of TMDLs, credit should be given to New York State for past reductions in nutrient loadings, including those resulting from the upgrade of the Binghamton-Johnson City Joint Sewage Treatment Facility, the upgrade of the Town of Erwin WWTP, and the upgrade of the Village of Canisteo WWTP, the construction of the Whitney Point Reservoir, the construction of the Alfred-Almond Reservoir, declining agricultural lands, and increasing forested lands. Furthermore, in the development of TMDLs, the USEPA should recognize states that have experienced increased population growth and associated increased nutrient loadings to the Bay.

F. Lack of Confidence with the "Bay Model"

There is a general lack of confidence regarding the Chesapeake Bay Watershed Computer Model, in regards to its ability to accurately predict current nutrient loadings from within the watershed and reductions in nutrient loadings due to contemplated improvements and management programs. Large deviations in estimated delivered nutrient loads have occurred from one version of this model to the next. For example, Version P5.2 (2008) of the Model predicted a total annual delivered total nitrogen loading from New York to the Bay of 16.1 million lbs/year, while Version P5.3 is predicting 10.6 million lbs of annual delivered total nitrogen loading. This large variation casts doubt on the ability of this model to be an effective and reasonable planning tool, as well as the basis of establishing TMDLs.

G. In-Bay Activities that Impact Water Quality

A number of "in-Bay" activities may act to degrade the Bay's water quality and appear to be largely ignored. These activities include the following.

- Increased shoreline development along the Bay
- Overfishing of oysters and menhaden that are filter feeders that act to improve water quality
- Navigational dredging within the Bay
- Intensive chicken farming operations to the east of the Bay

IV. FUNDING CONSIDERATIONS

Given that the Chesapeake Bay is recognized as a “national treasure”, we believe that anything less than a federally administered and federally funded approach diminishes the federal government’s ability to lead this effort, compromising the effectiveness of the initiative and risking its failure.

Furthermore, beyond the initial construction costs, increased annual O&M costs would also be significant and a recurring financial burden for rate payers. A funding mechanism by which increased O&M costs can be defrayed should be developed and instituted. A template of such a funding mechanism may already exist with the New York City/New York City Watershed program. In the NYC/NYC Watershed example, a downstream entity requiring improved water quality paid for upstream WWTP improvements (and increased O&M costs), that were not needed for upstream water quality but for downstream water quality benefits. It is felt that the NYC/NYC Watershed scenario parallels the Bay States/New York State situation currently at point.

In closing, we would like to comment upon the impacts of atmospheric deposition/airborne pollution from sources outside of New York State on New York’s nitrogen loading to the Chesapeake Bay. It is estimated that approximately 20 to 25 percent of the total nitrogen delivered to the Bay from New York State originates from airborne pollution from outside of the State. Furthermore, in addition to increasing nutrient loadings, these same airborne pollution sources are causing the acid lakes within the Adirondack Park and the deposition of mercury within our streams and lakes. Many of the fish consumption advisories within New York State pertain to this mercury pollution.

We would like to emphasize that we believe New York State has been a good upstream neighbor to the Bay states. Furthermore, we continue to remain committed to protecting and improving our water quality. That is what we do as WWTP owners and managers. What we are asking of you, our elected federal representatives, is to;

- Ensure that New York State’s unique circumstances are recognized and fairness is exercised by the USEPA in the development of TMDLs.
- Ensure that appropriate grant funding for project costs, as well as increased O&M costs, are made available, if/when significant WWTP improvements are required in New York State.
- Understand that airborne pollution from out of New York’s boundaries is a significant source of nitrogen reaching the Bay from New York State, and this same pollution source is having other serious environmental detriments.
- Promote state and federal legislation to extend the phosphate ban on household cleaning products to include automatic dishwashing detergent, to limit phosphorus at the source.

Sincerely,

*Binghamton-Johnson City Joint Sewage Board
Chemung County Sewer District
City of Corning
City of Hornell
Town of Erwin
Village of Addison*

*Village of Bath
Village of Canisteo
Village of Endicott
Village of Owego
Village of Painted Post
Village of Waverly*

Cc: Peter Grannis, NYSDEC Commissioner
Peter Frehafer, NYSDEC, Chesapeake Bay Coordinator
Chuck Fox, EPA HQ – Special Chesapeake Bay assistant to administrator
Shawn Garvin, EPA Regional Administrator – Region 3
Judith Enck, EPA regional Administrator – Region 2
James Edwards, Acting Director – EPA Chesapeake Bay Program Office
Senator George H. Winner, Jr.
Senator Thomas W. Libous
Assemblywoman Donna Lupardo
Assemblyman James Bacalles
Assemblyman Thomas O'Mara
Congressman Maurice Hinchey

Attachments: 

Signatures of Municipal Officials (representing their respective communities and WWTPs)

- Binghamton-Johnson City Joint Sewage Board
- Chemung County's dual Sewer Districts
- Southern Tier Central Regional Planning & Development Board
- the Mayor of the City of Corning and its Superintendent of Public Works
- the Mayor of the City of Hornell and its Chief Operator
- the Supervisor of the Town of Erwin, its Town Manager and its Chief WWTP Operator
- the Mayor of the Village of Addison
- the Village of Bath Director of Municipal Utilities and WWTP Chief Operator
- the Village of Canisteo Chief Operator
- the Mayor of the Village of Endicott and its Chief Operator
- the Mayor of the Village of Owego
- the Village of Painted Post Superintendent of Public Works
- the Mayor of the Village of Waverly